

Notice of Allowability

Application No.

09/870,451

Examiner

Daniel Pan

Applicant(s)

CATHERWOOD ET AL.

Art Unit

2183

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on 08/31/04.
2. ☒ The allowed claim(s) is/are 1-4,8,9-18 (claims 5-7 have been canceled).
3. ☒ The drawings filed on 06/01/01,09/28/01 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 08/31/04.
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date herein.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DANIEL H. PAN
PRIMARY EXAMINER
GROUP

Reasons for Allowance/Examiner's Amendment/Comment

Huang et al. (6,243,786) has been used as primary reference and Konopik et al. (4,768,149) has been used as a secondary reference in page 2, paragraph #3 of the last Office action on 06/14/04. This has been clarified in the attached Interview of Summary. Huang et al. (6,243,786) and Konopik et al. (4,768,149) were already cited to applicant in the 892 form on 06/14/04.

1. None of the prior art of record teaches the combined features of :
 - a) setting of a flag;
 - b) fetching of the target instruction for repeated execution,
 - c) interrupting the execution to load a first instruction from an interrupt service into an instruction register without being determine the reference to the program counter, and
 - d) continuing the execution after the interrupt when the repeat flag was set without refetching the target instruction (claim 1).
2. None of the prior art of record teaches the combined features of :
 - e) the store and change the loop count in a loop counter register, the prevention of the instruction after the target instruction from being fetched until the loop reaches or exceeds a predetermined value, and the loading of the first instruction into an instruction register, determination of the first instruction of the interrupt routine without reference to a program counter (claim 9).

References on the Record

- a) Huang et al. (6,243,786) was used for showing the teaching of the fetching of and execution of a target instruction and the interruption of the execution (see col.5, lines 29-30, col.2, lines 25-40, col.6, lines 50-53). However, It did not specifically teach the first instruction of the interrupt service routine was being determined without reference to a program counter, nor the setting of the flag and the execution of the target instruction without refetching the instruction (claim 1), nor the combined features of the store and change of the loop count in a loop counter register, the prevention of the instruction after the target instruction from being fetched until the loop reaches or exceeds the predetermined value, and the loading of the first instruction into an instruction register (claim 9).
- b) Konopik (4,768,149) was used to supplement the Huang for the teaching of the referencing an interrupt service routine by a pointer, without a program counter (see col.15, lines 38-46). However, it did not teach the combined features as set forth in a)-e) above.
- c) Nakamura was cited by applicant . It showed the operation of a program counter circuit (see fig.2, col.2, lines 46-48, col.3, lines 10-15, see also fig.3 for the counter operation). However, it did not teach the repeated execution of the target instruction nor the combined features set forth above.

Authorization for this examiner's amendment was given in a telephone interview with Paul Katz on 09/28/04.

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

In the claim :

a) claim 10, line 1, as filed by applicant on 08/31/04 missed the dependency from claim 9 due to the typographical error by applicant. Since it is meant to be remain in the original form, claim 10 on 08/31/04 has been corrected as being dependent from claim 9 to keep the same original claim 10 as filed on 06/01/01. Proper correction will be done by docket clerk.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Pan whose telephone number is 703 305 9696, or the new number 571 272 4172. The examiner can normally be reached on M-F from 8:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chan, can be reached on 703 305 9712, or the new number 571 272 4162. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

21 Century Strategic Plan

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